

A2

Power Amplifier



ELAN[®]
HOME SYSTEMS

Preface

Purpose of This Manual

This manual provides step-by-step installation instructions and connection examples, along with basic user information for installation and ongoing use of the A2 Two Channel Amplifier. This manual is written for the installer of this equipment.

Organization

The following information is contained in this manual:

Safety Information	Provides a comprehensive list of safety practices and procedures allowing for the safe installation and operation of ELAN Home Systems' A2 Two Channel Amplifier.
A2 Introduction	Provides an introduction to the A2 Two Channel Amplifier, along with system features to include Front and Rear panel controls, indicators and connections, along with a short description of each.
A2 System Design Overview	Provides a system design application overview of the A2 Two Channel Amplifier for use in audio applications.
A2 Connections	Provides a description of A2 Two Channel Amplifier connections including connections made with ELAN Multi-Room Systems and direct connections to the A2 Two Channel Amplifier from other components.
Troubleshooting	Provides troubleshooting tables to help fix common discrepancies that may be associated with the A2 Two Channel Amplifier.
Specifications	Appendix A provides equipment specifications for the A2 Two Channel Amplifier.
Rack Mounting	Appendix B provides specifications for Rack Mounting of the A2 Two Channel Amplifier using the included rack mount brackets.



WARNING

RISK OF ELECTRIC SHOCK DO NOT OPEN!

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

**WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**



IMPORTANT SAFETY INFORMATION

Read Information—All the safety and operating information should be read before the appliance is operated.

Follow Information—All operating and use information should be followed.

Retain Information—The safety and operating information should be retained for future reference.

Heed Warnings—All warnings on the appliance and in the operating instructions should be heeded.

Wall Mounting—Mounting of this appliance should be done only by an authorized installer.

Ventilation—The appliances should be situated so that their location or position does not interfere with their proper ventilation. These appliances should never be placed near or over a radiator or heat register. These appliances should not be placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Non-Use Periods—Appliances that are left unattended and unused for long periods of time should be de-energized.

Power Sources—The appliances should be connected to a power supply only of the type described in the operating instructions or as marked on each appliance. If you are not sure of the type of power supply to your home, consult your authorized ELAN dealer or local power company.

Grounding or Polarization—Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one blade wider than the other blade. A grounding type plug has two blades and a third grounding prong. The polarized wide blade and the third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Water and Moisture—To reduce the risk of electric shock or fire, these appliances should not be used near water—for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Power Cord Protection—Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

Telephones—Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning. Do not use a telephone to report a gas leak if the leak is in the vicinity of the ELAN electronic equipment because of risk of fire or explosion.

Cleaning—Unplug the apparatus from the power outlet before cleaning. Use only a dry cloth to clean the apparatus.

Power Lines—An outdoor antenna should be located away from power lines. When installing an outside antenna system, extreme care should be taken to avoid touching power lines or circuits, as contact with them may be fatal.

Outdoor Antenna Grounding—If an outside antenna or cable system is connected to these audio products, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the U.S. National Electrical Code, and Section 54 of the Canadian Electrical Code, provide information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See the grounding diagram (right).

Overloading—Do not overload wall outlets and extension cords, as this could result in fire or electric shock.

Object and Liquid Entry—Never insert objects of any kind through the openings of these appliances, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Care should be taken so that objects do not fall and liquids are not spilled into the appliance through openings in the enclosure.

Servicing—Do not attempt to service these appliances yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring Service—These appliances should be serviced by qualified service personnel when:

- A power supply connection or a plug has been damaged or
- If liquid has been spilled into the appliance or objects have fallen into the appliance or
- The appliance has been exposed to water or moisture or
- The appliance does not appear to operate normally or exhibits a marked change in performance or
- The appliance has been dropped or the enclosure damaged.

Replacement Parts—When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards. The Master Control Unit battery should be replaced only after turning the power off and only by an authorized installer.

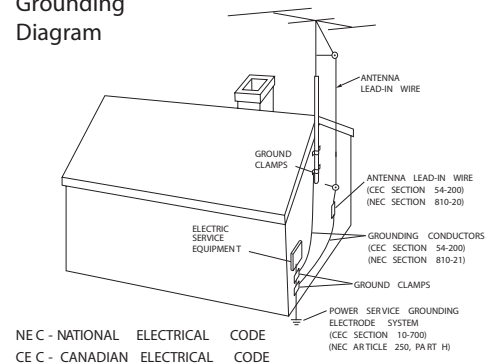
Safety Check—Upon completion of any service or repairs to this audio product, ask the service technician to perform safety checks to determine that the audio product is in proper operating condition.

Lightning Storms—Unplug this apparatus during lightning storms or when unused for long periods of time.

Attachments and Accessories—Use only attachments/accessories specified by the manufacturer.

Cart, Stand, Tripod, Bracket or Table—Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip over.

Grounding
Diagram



Disconnect Device—Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain operable.



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A2

Power Amplifier

Items in package:

- A2 Power Amplifier
- Rack Mount Brackets
- Power Cord
- Installation Manual

Chapter 1: Introduction

Boasting 150 Watts per channel at 2 ohms, the ELAN A2 Power Amplifier is designed and engineered to be the definitive cornerstone component for any high-power application. The A2's discrete output circuitry easily powers up to three pairs of 8 ohm speakers simultaneously, eliminating the need for speaker selector boxes or load protection devices. Buffered loop outputs provide easy connection of additional amplifiers. Using proven analog technology, the A2 adds advanced features like Trigger Inputs/Outputs to make it the premier two channel amplifier in its price range.

A2 Features

2 x 60 Watts per Channel @ 8 Ohms

2 x 100 Watts per Channel @ 4 Ohms

2 x 150 Watts per Channel @ 2 Ohms

Buffered Line Outputs

- allow the signal to be sent to other A2 amplifiers, A/V receivers, etc.

System Trigger In/Out

- SYSTEM TRIGGER IN allows all channels of the amplifier to UNMUTE when a signal is received.
- SYSTEM TRIGGER OUT sends a +12VDC pulse whenever any of the channels of the amplifier are UNMUTED.

Individual Channel Level Adjustment

- Fine-tune each channel's level using precision potentiometers.

5-Way Speaker Binding Post

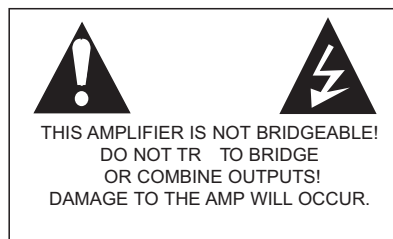
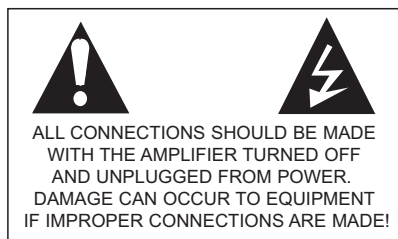
- The A2 is equipped with gold plated, 5-way speaker binding posts. This allows for five methods of speaker wire termination: bare wire, spade lug, pin, single banana and dual banana plug.

Safety Concerns

Use only grounded outlets when powering this product. Making any modification to the power cord could cause unsafe operation and will void the manufacturer's warranty.

AC Power Considerations

The A2 requires 3.7 Amps of AC current. When designing any whole house system using multichannel amplifiers, make sure to provide adequate provisions for all electronic equipment to be installed. This may require additional outlets and/or circuit breakers to be installed. Consult a licensed electrician in this case.



A2 Functions and Indicators

FRONT

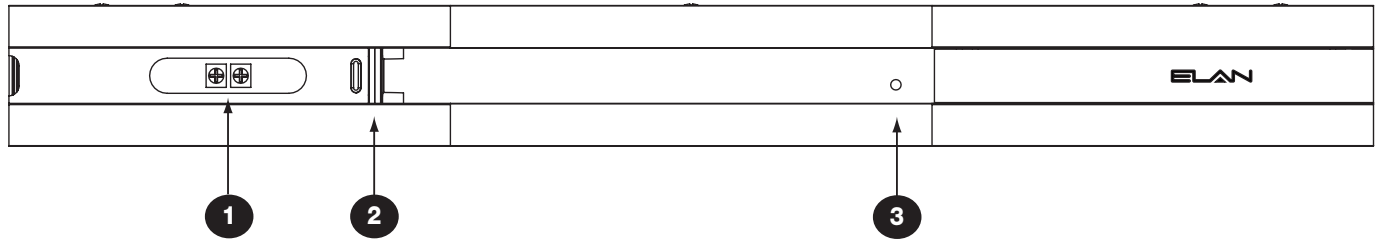


Figure 1-1: A2 Front Panel

Table 1-1:Front Panel

Item	Function
1	Channel Gain Potentiometers (2)
2	Pull-Out Access Door
3	POWER LED - Glows Blue When Power Switch is ON and Unit Plugged In

A2 Rear

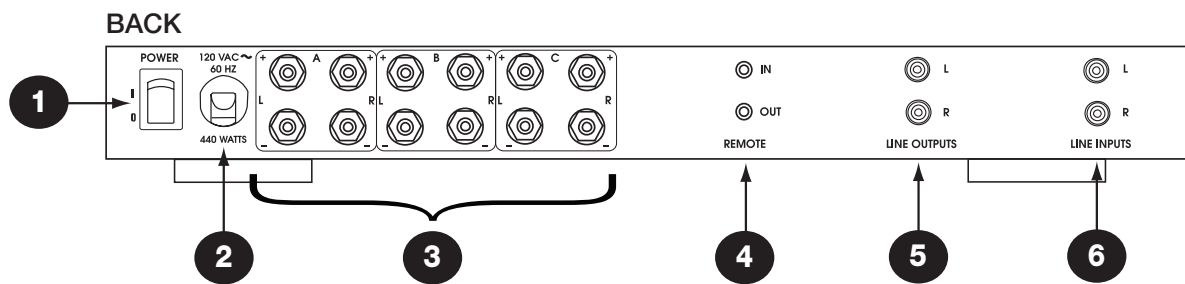


Figure 1-2: A2 Rear Panel

Table 1-2: Rear Panel

Item	Function
1	POWER SWITCH
2	POWER CORD
3	SPEAKER OUTPUTS
4	SYSTEM TRIGGER IN/OUT
5	LINE OUTPUTS
6	LINE INPUTS

Chapter 2. System Design & Applications

System Design

The first step to a good design is to map the system. It is advisable to mark up a copy of the house floor plan with speaker, keypad, touch panel, volume control, and equipment locations etc. Make sure that all locations are decided upon before pre-wiring commences so that all necessary wiring and installation hardware is in place. This unit will be interfacing with other components such as multi-room controllers, source components, communications controllers, serial controllers, and user interfaces, so it is essential that ALL system components are accounted for prior to the pre-wire stage.

Secondly, make a detailed list of all components. Include source equipment, keypads, touch panels, volume controls, amplifiers, and communications gear. Be sure to include necessary electrical boxes, structured wiring enclosures, telephone lines, rough-in brackets, patch cords, power supplies, etc.

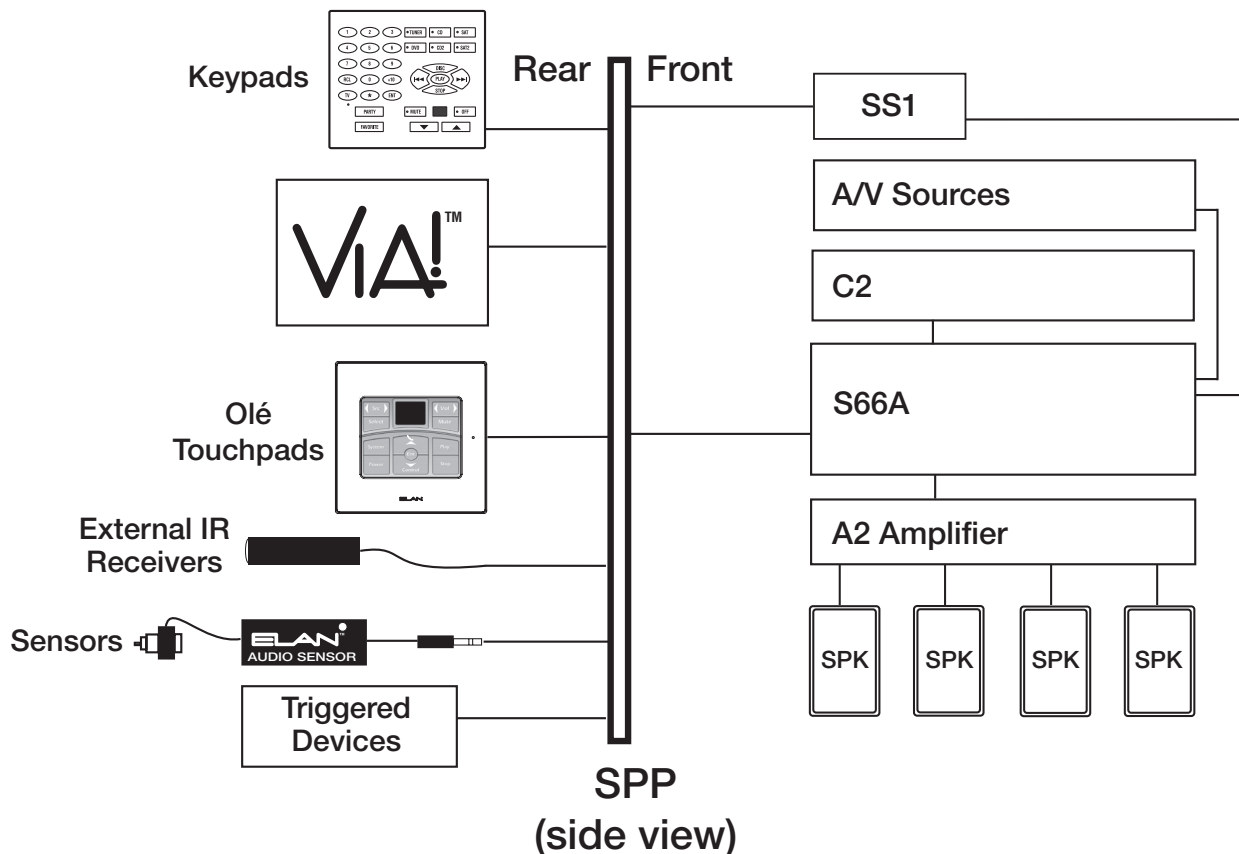


Figure 2-1: System Design

Pre-Wire

Wiring Considerations

- **Speaker Wires** 28-16 AWG Speaker Wire
- **Audio Cables** RCA Patch Cables
- **Triggers** 2 Conductor Wire w/ 3.5mm mono connector

Applications

The A2 is specifically designed for multi-speaker applications. Three parallel amplifiers per channel provide high-current drive for high-impact bass performance. The A2 also features three pair of gold-plated 5-way binding posts for easy connection of multiple speaker pairs, a Remote Audio Mute Circuit that eliminates any “noise” that might come through the speakers when the source components are not in use and 'installer-friendly' Channel Level Adjustments which are easily accessible via the front panel.

4 Ohm Speakers

Since the A2 Power Amplifier is stable down to a 2 ohm load, it can handle multiple speaker pairs wired in parallel. The following diagrams show the maximum number of speaker pairs that can be connected to the A2.

- Audio Output to Line Inputs 1 & 2

Each Zone's Speakers Volume Ramps Up & Down Simultaneously

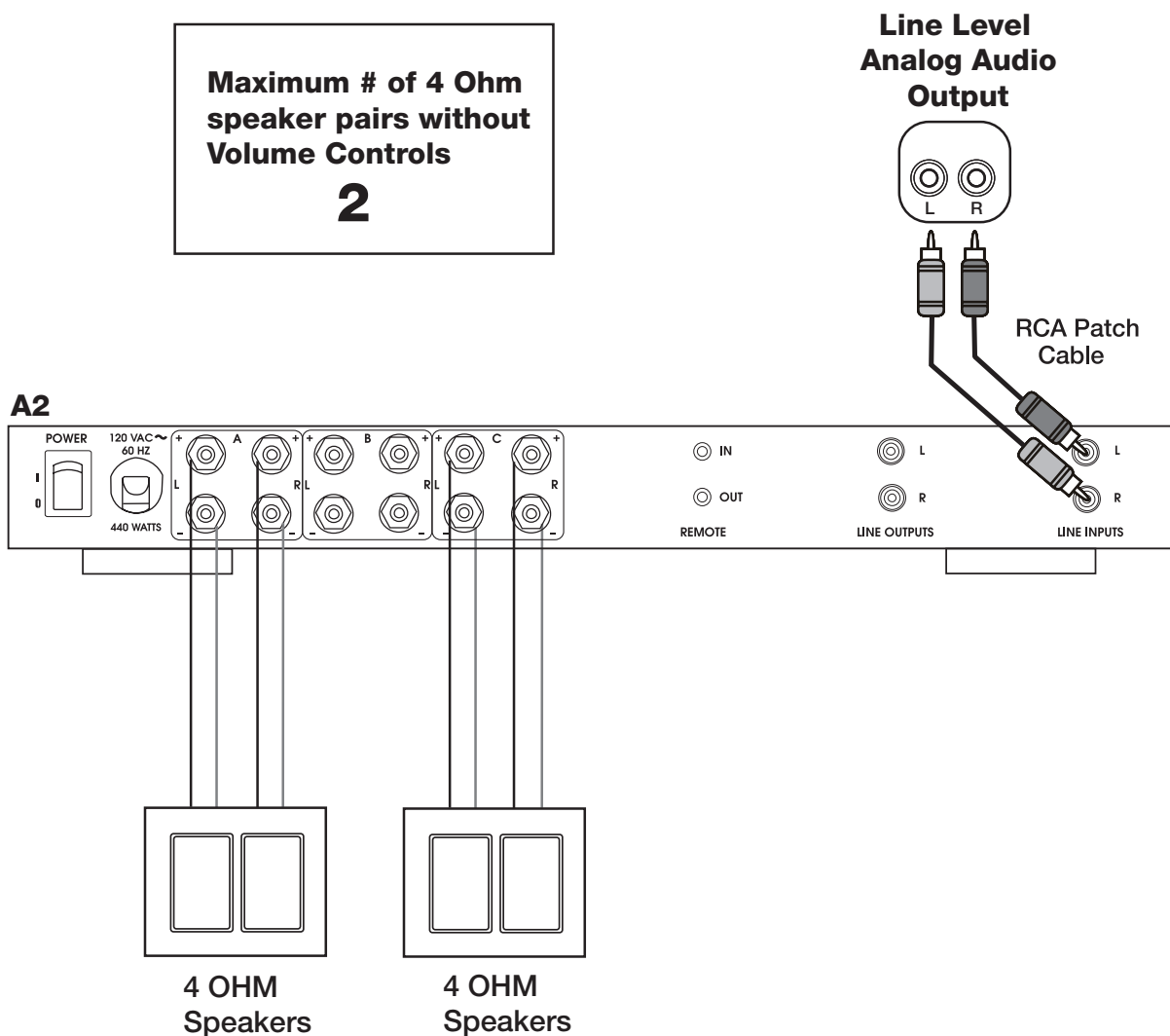


Figure 2-2: 4 Ohm Speaker Example

4 Ohm Speakers w/ Volume Controls

Since the A2 Power Amplifier is stable down to a 2 ohm load, it can handle multiple speaker pairs wired in parallel. The following diagrams show the maximum number of speaker pairs that can be connected to the A2.

- Audio Output to Line Inputs 1 & 2
- Volume Controls on Each Speaker Output

Each Zone's Speakers Volume Ramps Up & Down Independently

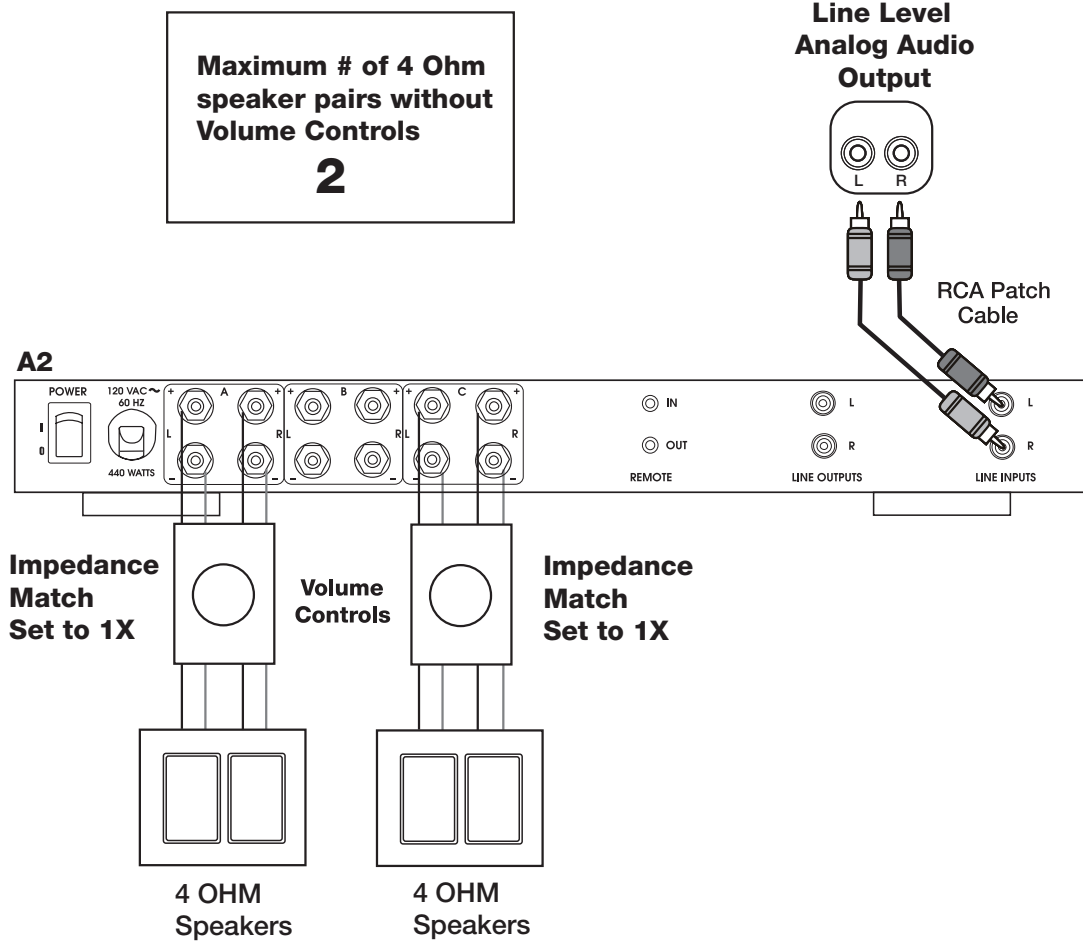


Figure 2-3: 4 Ohm Speakers w/ Volume Controls

Maximum # of 4 Ohm speaker using Impedance Match Volume Controls	
Impedance Match	4 Ohm Speaker Pairs
1X	2
2X	3
4X	4
8X	8

6 Ohm Speakers

- Audio Output to Line Inputs 1 & 2

Each Zone's Speakers Volume Ramps Up & Down Simultaneously

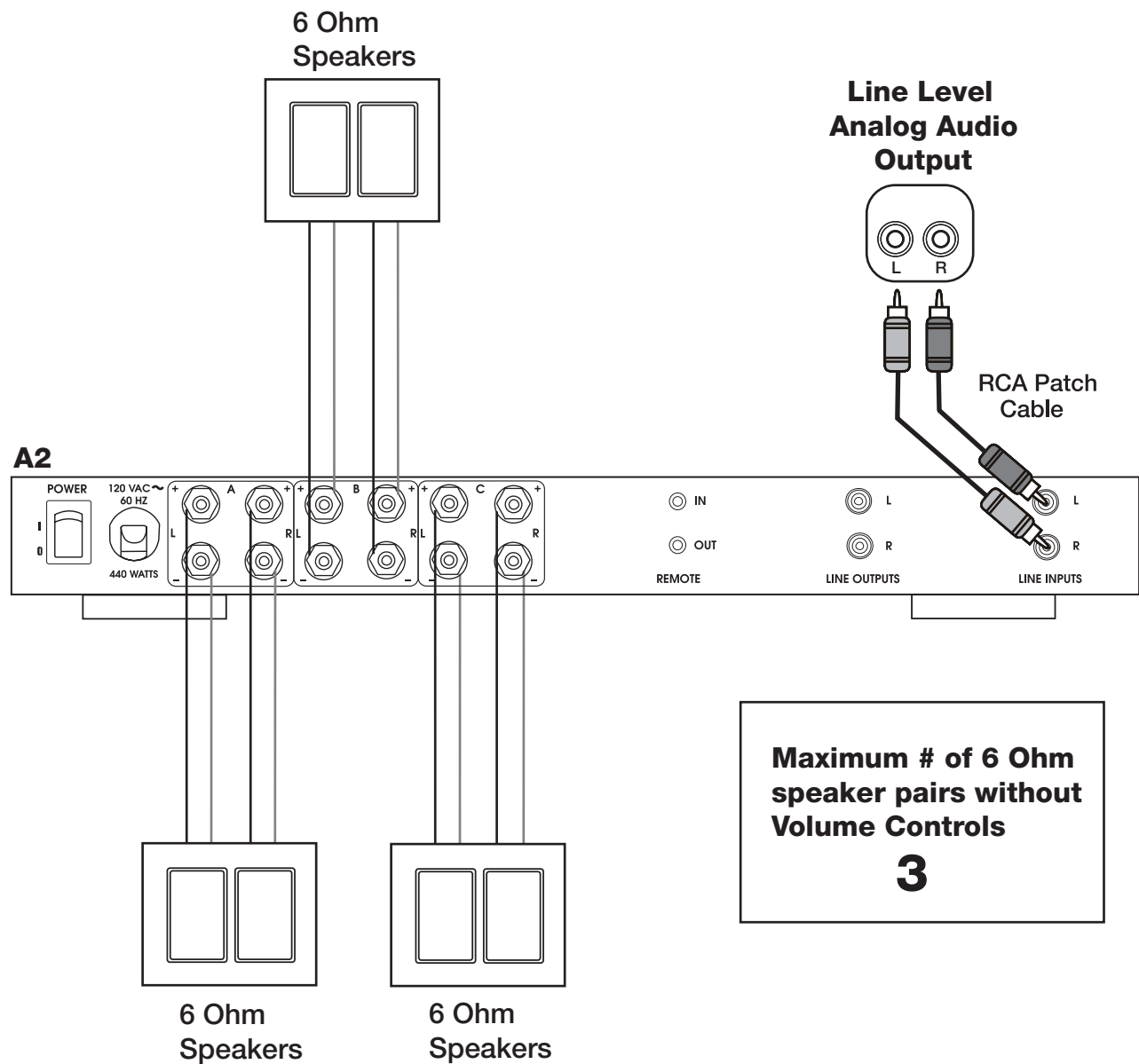


Figure 2-4: 6 Ohm Speaker Example

6 Ohm Speakers w/ Volume Controls

- Audio Output to Line Inputs 1 & 2
- Volume Controls on Each Speaker Output

Each Zone's Speakers Volume Ramps Up & Down Independently

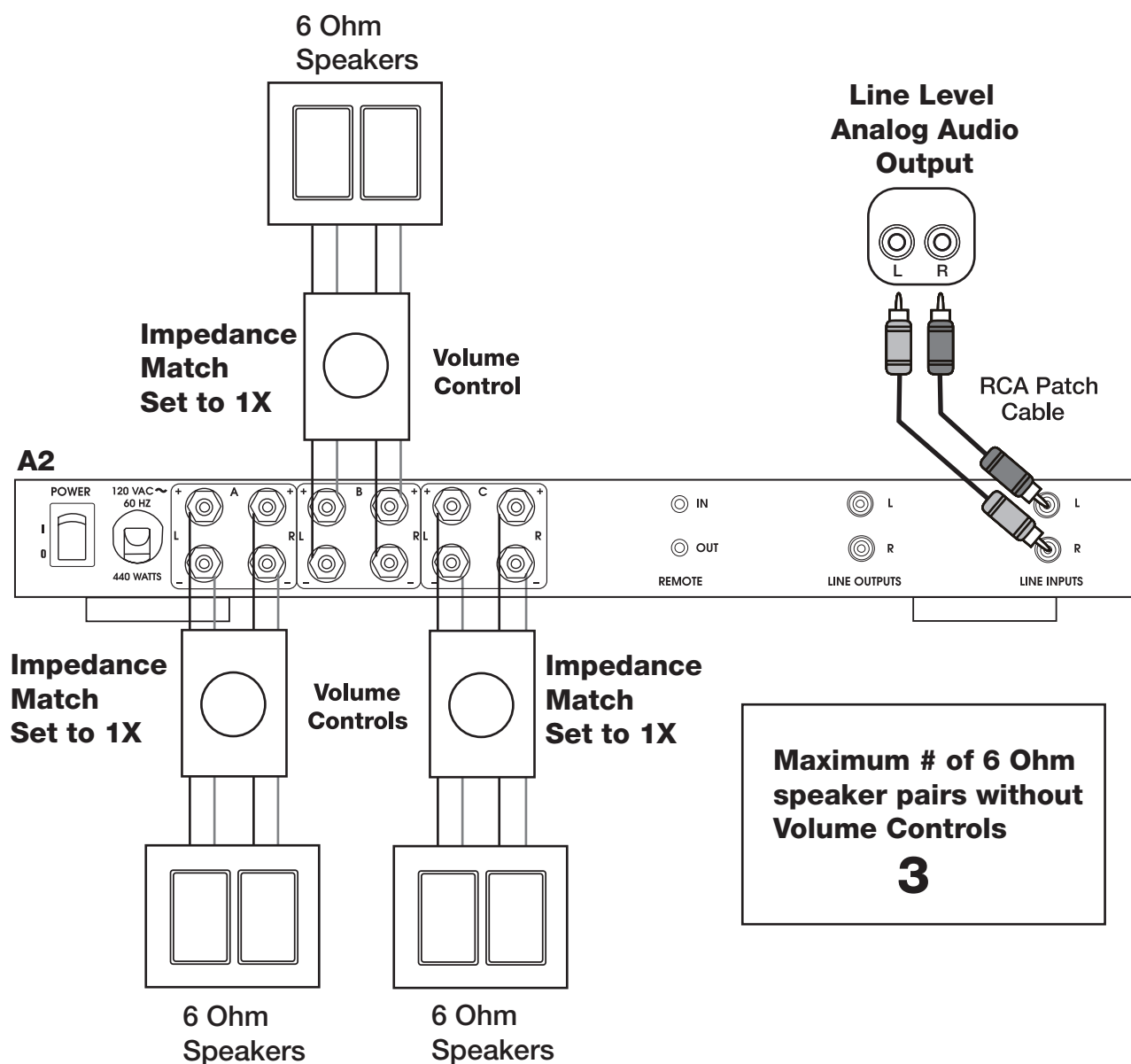


Figure 2-5: 6 Ohm Speakers w/ Volume Controls

Maximum # of 6 Ohm speaker using Impedance Match Volume Controls	
Impedance Match	6 Ohm Speaker Pairs
1X	3
2X	4
4X	6
8X	12

8 Ohm Speakers

- Audio Output to Line Inputs 1 & 2

Each Zone's Speakers Volume Ramps Up & Down Simultaneously

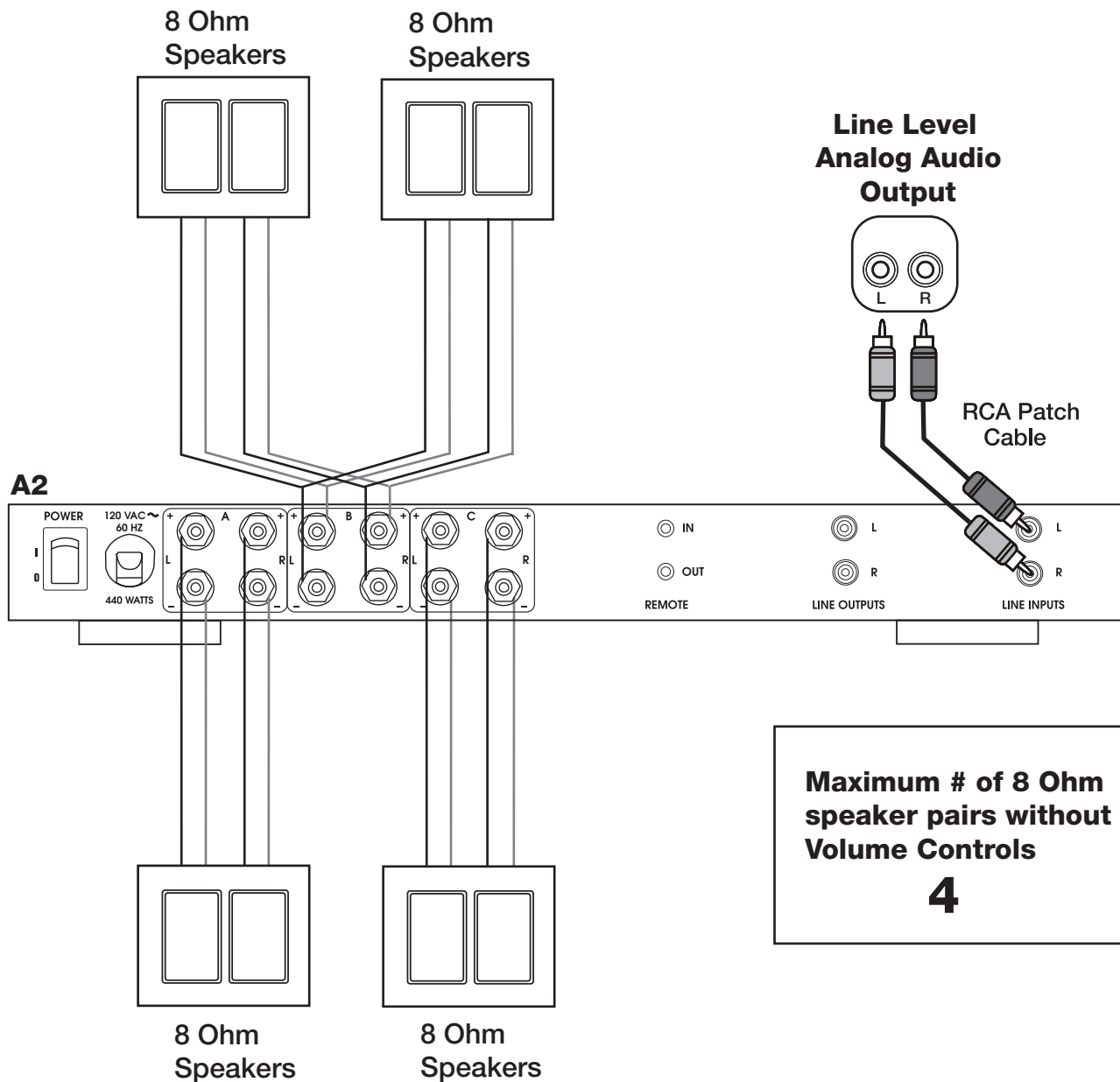


Figure 2-6: 8 Ohm Speaker Example

8 Ohm Speakers w/ Volume Controls

- Audio Output to Line Inputs 1 & 2
- Volume Controls on Each Speaker Output

Each Zone's Speakers Volume Ramps Up & Down Independently

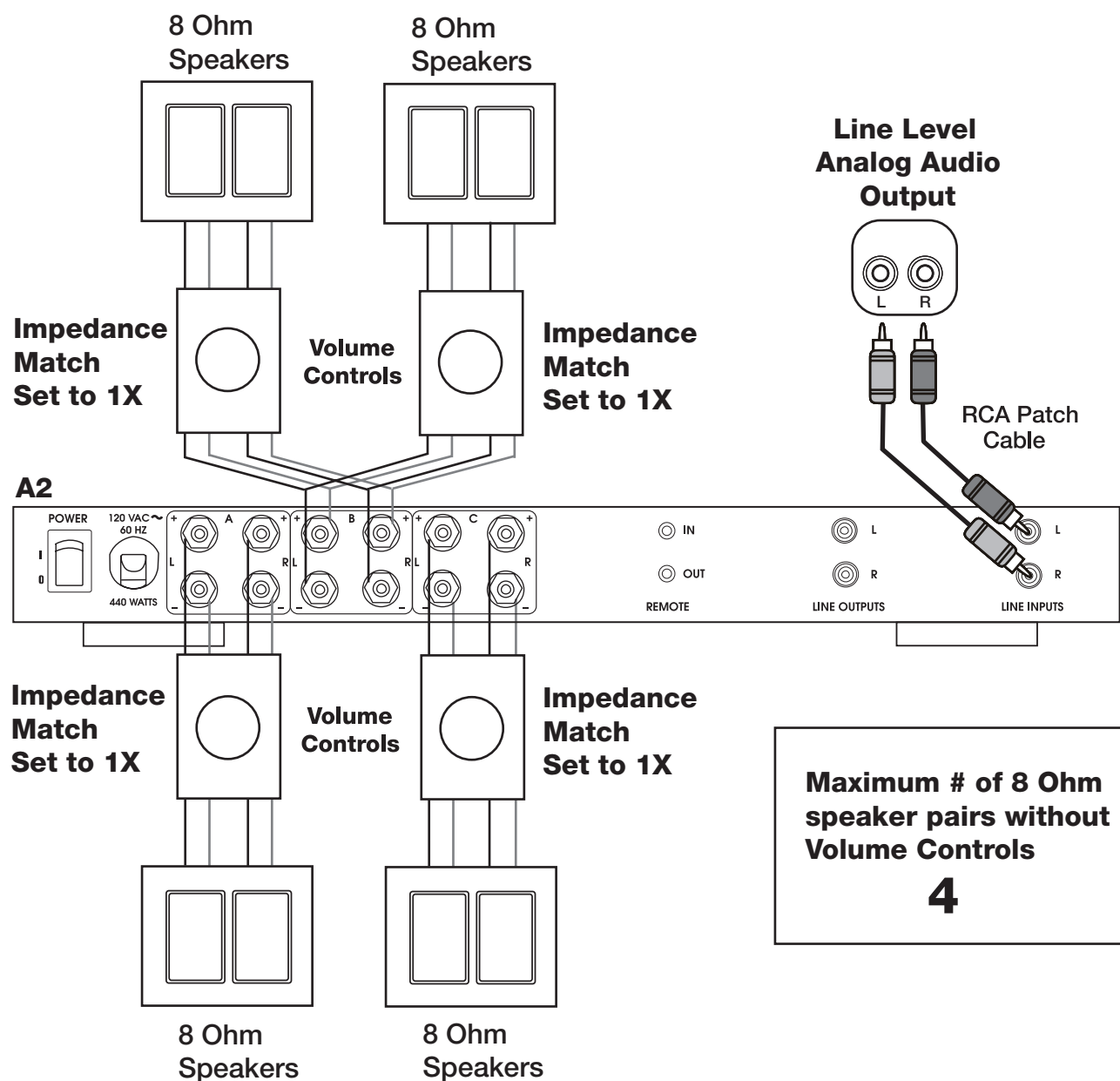


Figure 2-7: 8 Ohm Speakers w/ Volume Controls

Maximum # of 8 Ohm speaker using Impedance Match Volume Controls	
Impedance Match	8 Ohm Speaker Pairs
1X	4
2X	6
4X	8
8X	16

Multi-Room Stereo Sub-Zones

ELAN's S66A/S86A Integrated Multi-Room Controllers have built-in amplification for six stereo zones as well as six sets of preamp outputs for the addition of sub-zones. The A2 is ideally suited to amplify outdoor subzones using rotary or electronic volume controls if separate volume up/down functionality is desired in the sub-zones as shown in the S66A example below.

S66A Stereo Sub-Zones

- Preamp Output 1 & 2 to Line Inputs 1 & 2
- Preamp DIP Switches in VARIABLE Position

Each Zone and Sub-Zone Speakers Volume Ramps Together

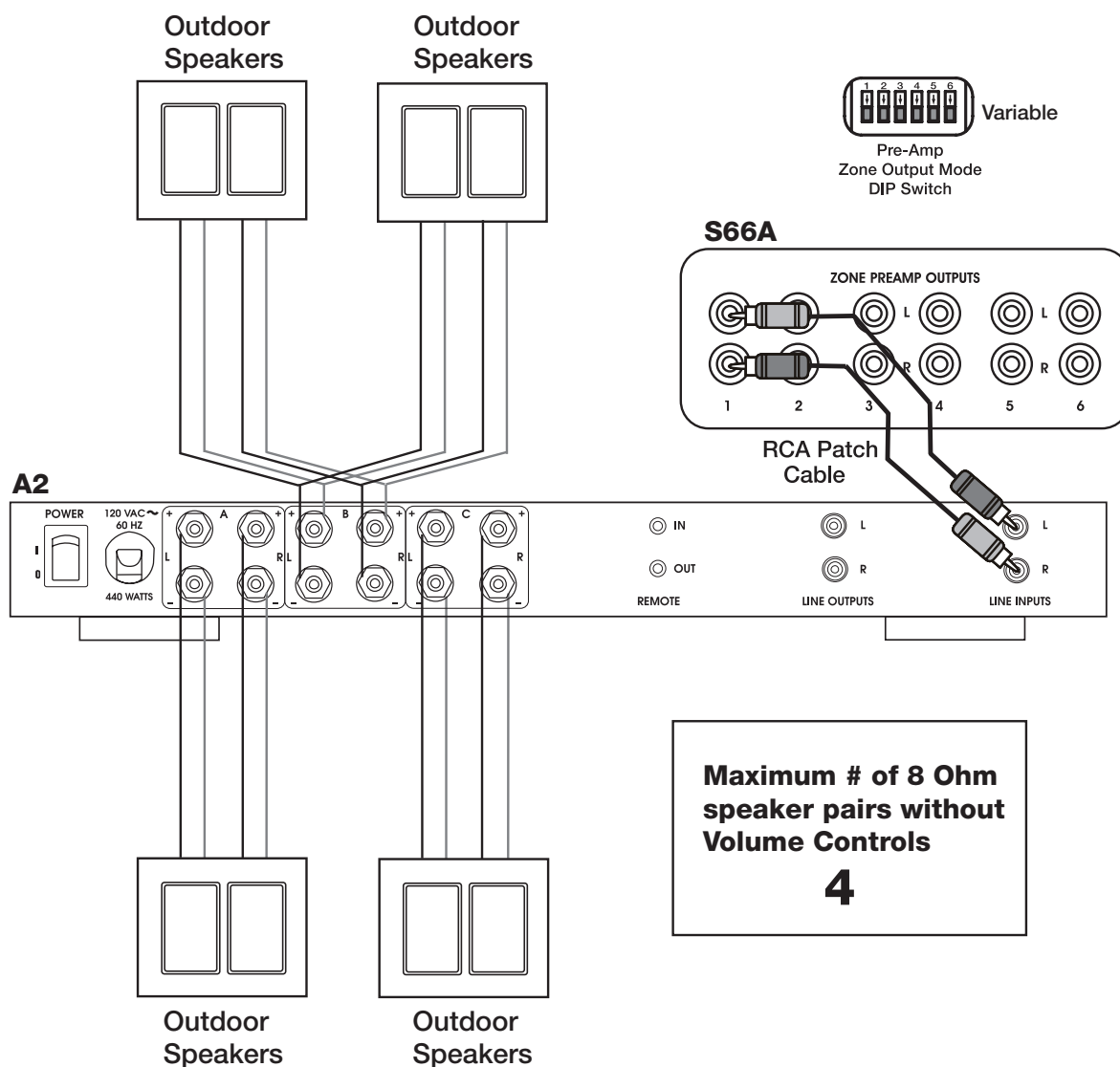


Figure 2-8: S66A Sub-Zones

S66A Stereo Sub-Zones

- Preamp Output 1 & 2 to Line Inputs 1 & 2
- Preamp DIP Switches in FIXED Position
- Volume Controls on Each Speaker Output

Each Zone and Sub-Zone Has Independent Volume Control

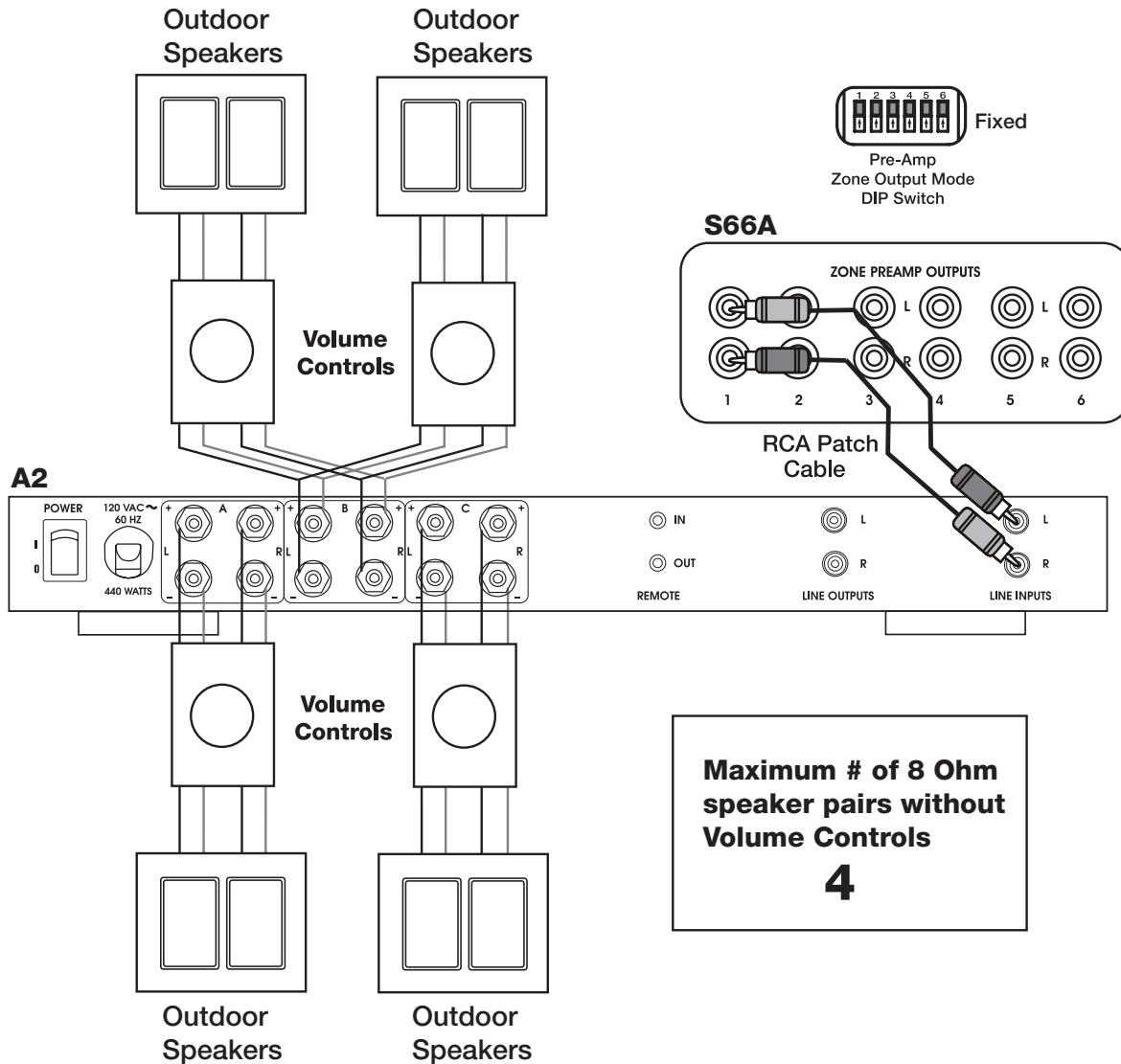


Figure 2-9: S66A Sub-Zones

S128P Stereo Sub-Zones

ELAN's S128P Integrated Multi-Room Controller has variable preamp outputs for eight stereo zones as well as eight sets of fixed preamp outputs for the addition of sub-zones. The A2 has the ability to provide high power to large area such as Great Rooms. Use rotary or electronic volume controls if separate volume up/down functionality is desired in the sub-zones.

S128P Stereo Sub-Zones

- RCA Line Out cables in VARIABLE Preamp Outputs

Each Zone and Sub-Zone Speakers Volume Ramps Together

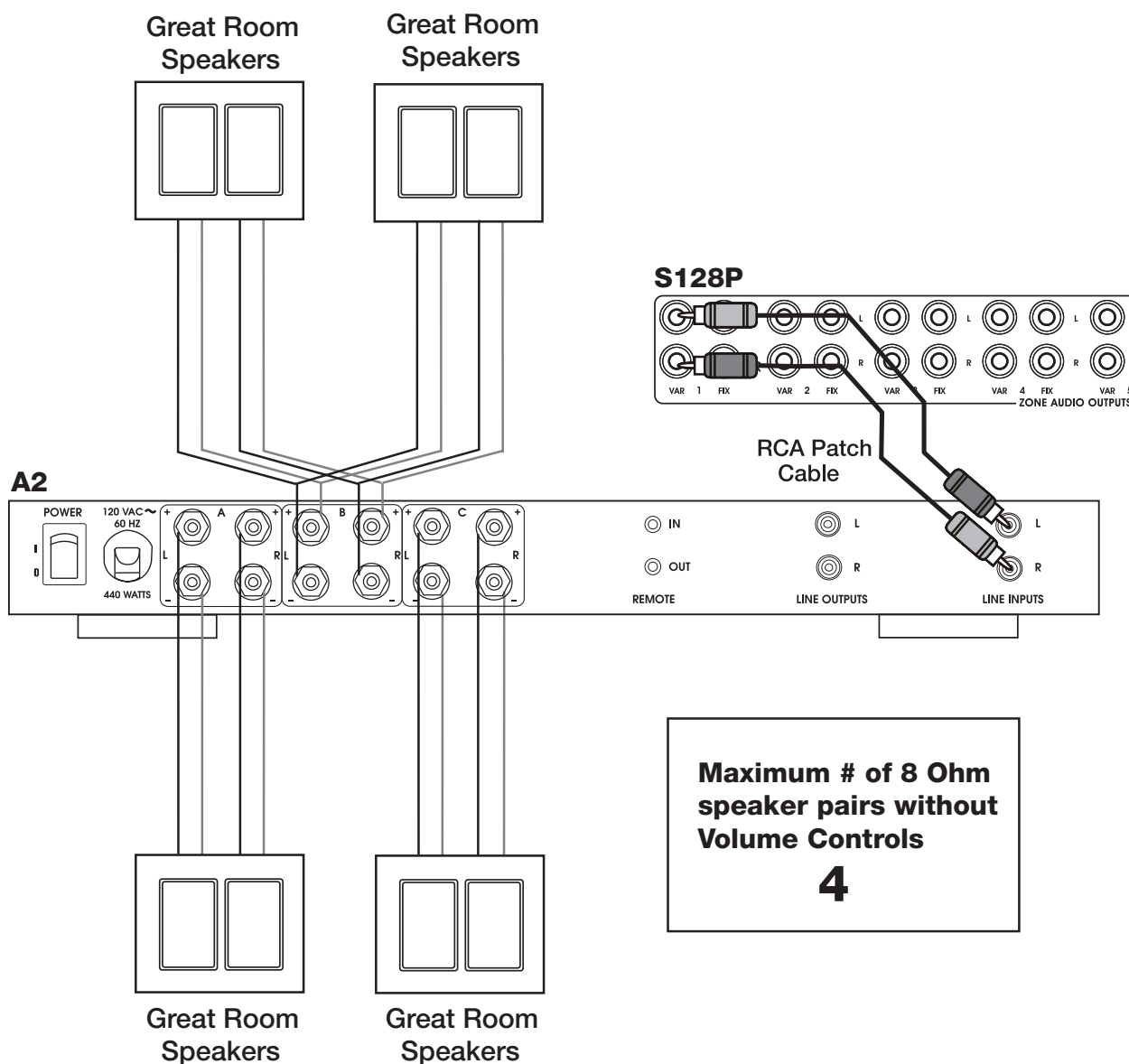


Figure 2-10: S128P Sub-Zones

S128P Stereo Sub-Zones

- Fixed Preamp Output 1 & 2 to Line Inputs 1 & 2
- RCA Line Out cables in FIXED Outputs
- Volume Controls on Each Speaker Output

Each Zone and Sub-Zone Has Independent Volume Control

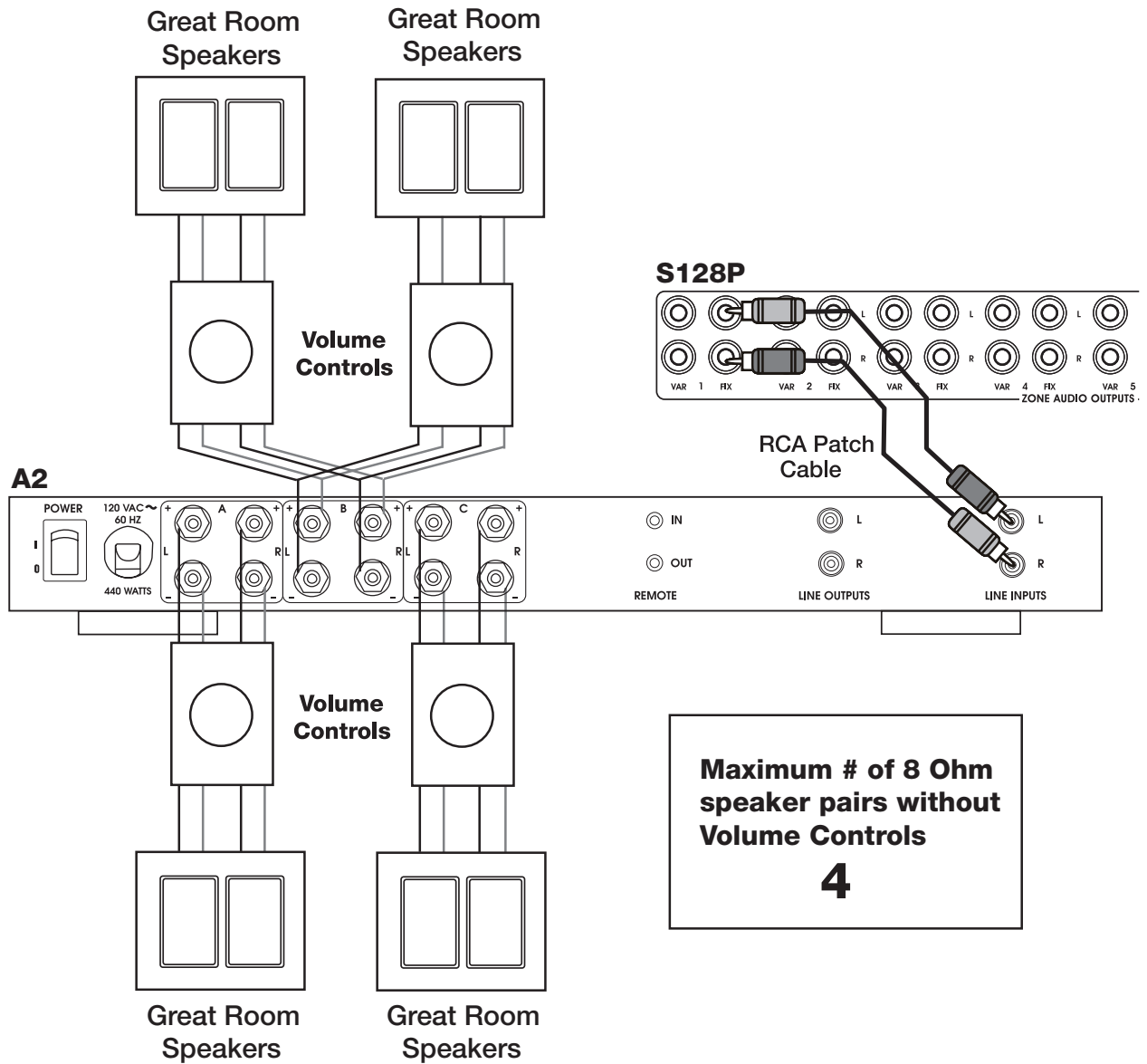


Figure 2-6: S128P Sub-Zones

Chapter 3: Connections

The A2 has several rear panel connections so it is important to label all cables and wires correctly. Label all input/output cable and speaker wires with their destination or source. This will save time during installation and any future upgrades to the system.

Use high quality line level RCA connector type cables for source connections to ensure the lowest possible noise and best sound performance. For most applications use 16AWG 2 conductor speaker cable. For wiring runs longer than 80 ft. it is recommended to use 14AWG 2 conductor speaker cable. The A2's high quality, gold plated 5-way binding post will accommodate speaker cabling sizes up to 12AWG. Attaching banana plugs will enable the connection of larger cable sizes. A 3.5mm mono interconnect cable may be used for amplifier and systems triggering.

Line Level Audio Inputs

Connect the zones by inserting the RCA connectors into the dedicated direct input jack on each channel.

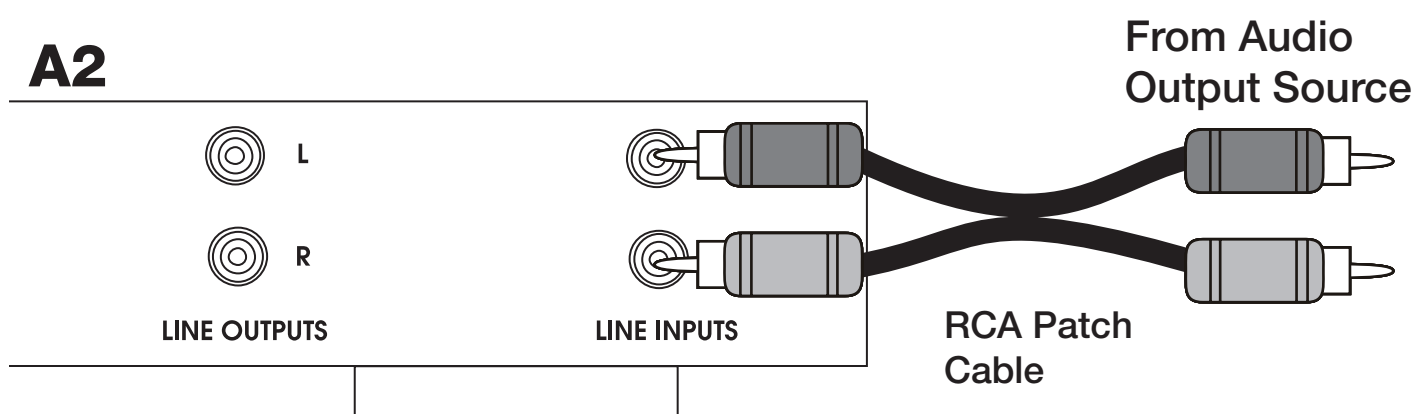


Figure 3-1: Line Inputs

Line Outputs

A stereo or monaural audio signal connected to the A2's main LINE INPUT is routed to the A2's RCA Line Outputs. This feature is excellent for standalone distributed audio systems where one source (i.e. an A/V Receiver) is providing audio to the entire home, and also for ELAN multi-room applications where a zone's audio signal needs to be routed to multiple amplifier channels. Examples of both these applications are shown in the **Chapter 2**.

Line audio outputs enable connection of additional amplifiers to allow further system expansion. Use high quality RCA interconnect cables to ensure low noise and great sound. The A2 Line Outputs are buffered, a maximum of four amplifiers may be 'daisy-chained' to each Line Outputs.

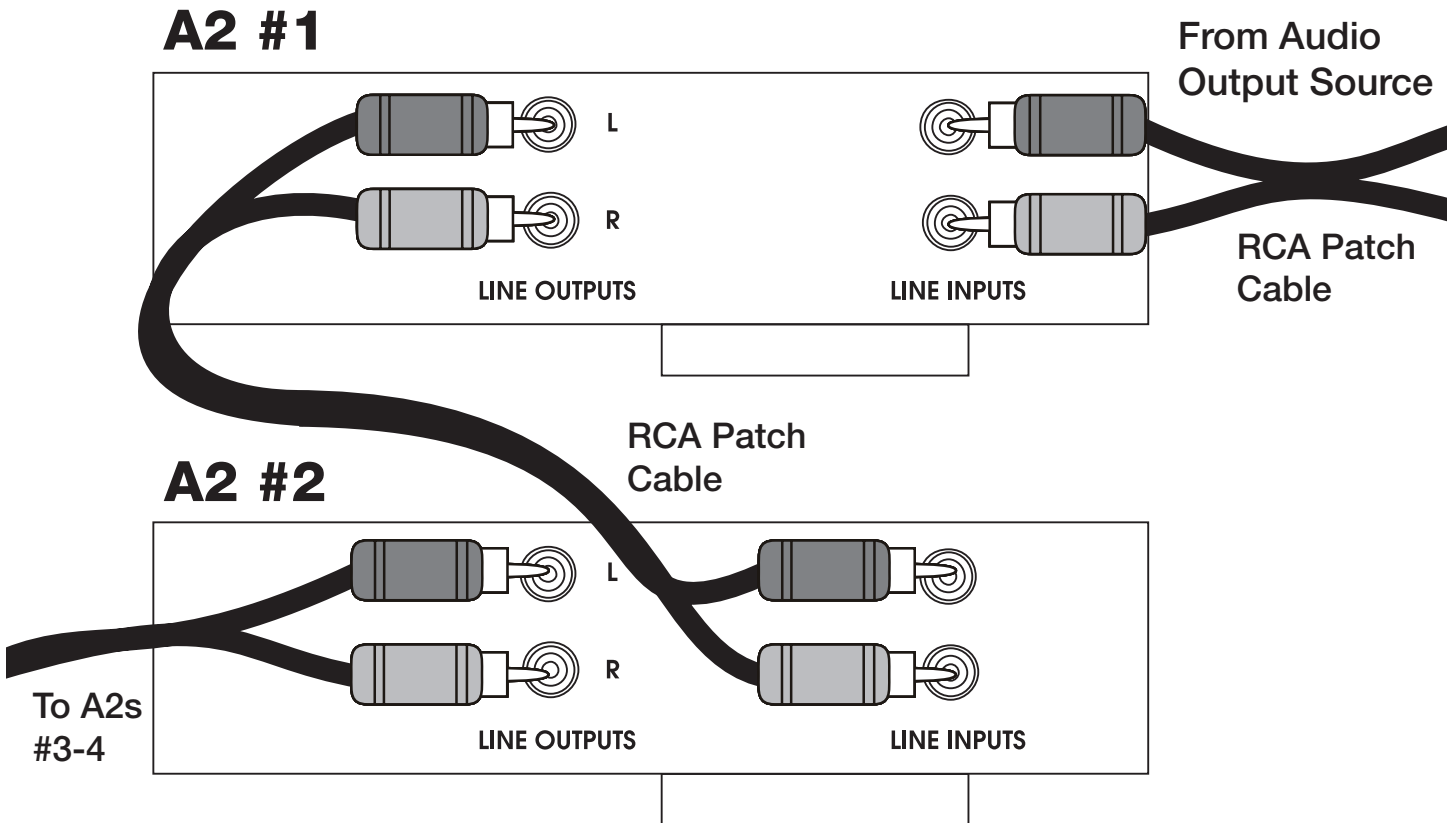


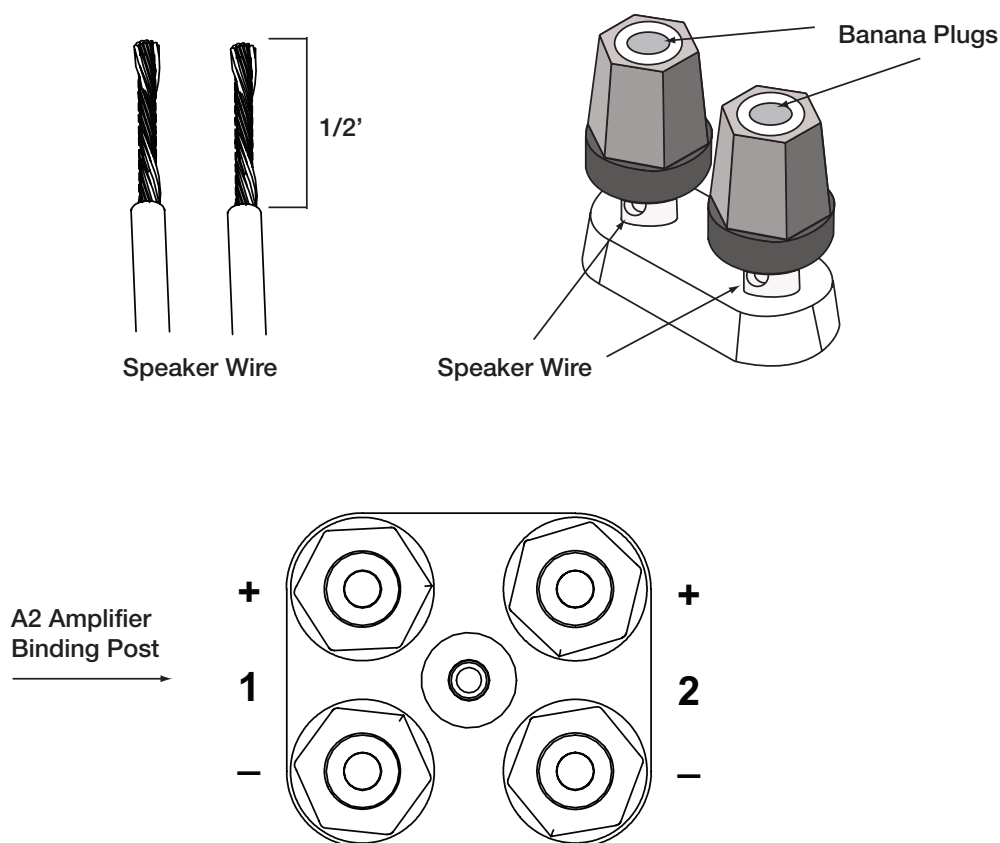
Figure 3-2: Line Outputs

Speaker Binding Post

The A2 is equipped with gold plated, 5-way speaker binding posts. This allows five methods of speaker wire termination: bare wire, spade lug, pin, single banana and dual banana plug. Label all speaker wires with their destination to ensure easy configuration. To attach speaker wires use the following method:

1. Carefully split the speaker wire insulation at least two inches.
2. Strip 1/2 inch of the insulation from the speaker wire conductor exposing the bare wire.
3. Twist the wire strands of each conductor, if using banana plugs, attach wire to banana plug observing polarity.
4. If using banana plug; insert plug ends into binding post observing correct polarity. If using the bare wire method; loosen red and black binding post caps and insert the bare wire through the hole in the post. Tighten the knob until the wire is securely clamped.

CAUTION! *Speaker Wire connections must be made with the amplifier OFF!*



WARNING: Do not allow any strands of the bare speaker wire to touch the Amplifier Chassis or another Connector.

Figure 3-3: Speaker Binding Post

Triggers

A REMOTE TRIGGER IN port allows all channels to turn on or mute simultaneously. The REMOTE TRIGGER INPUT can receive 5-24 Volts AC or DC. The 12 Volt DC REMOTE TRIGGER OUT can be used to turn on other equipment, additional A6s or other amplifiers, or to perform automated functions desired by the user. Use 3.5mm mono interconnect cables to make Trigger connections.

SYSTEM TRIGGER IN

To mute/un-mute all channels simultaneously, connect a system-wide 5-24 Volt DC triggering source to the SYSTEM TRIGGER IN port using a 3.5mm mono interconnect cable. Examples of triggering sources include an ELAN Multi-Zone Controller's SYSTEM TRIGGER OUT or REMOTE OUT, an A/V receiver's switched outlet connected to a power supply, or a +12VDC TRIGGER OUT from another ELAN amplifier.

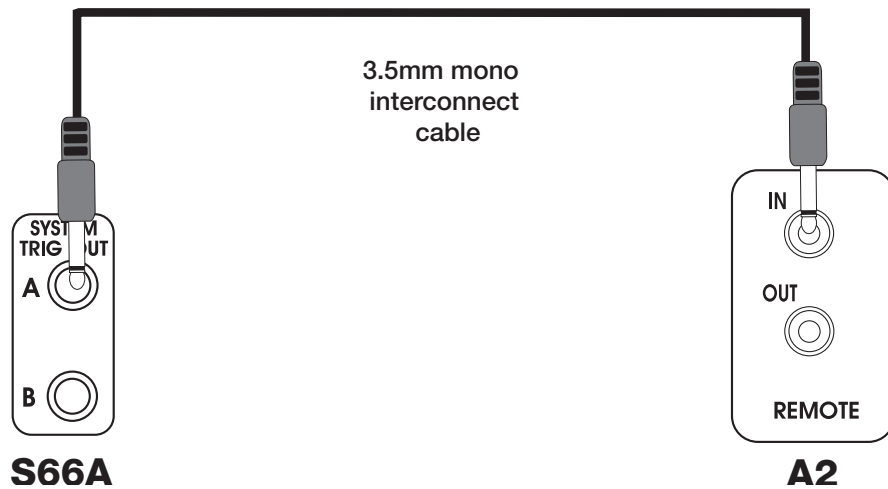


Figure 3-4: Remote Trigger In

SYSTEM TRIGGER OUT

Whenever the A2 is powered ON, the REMOTE TRIGGER OUT becomes active. This output sends a +12VDC 100mA signal to other devices with a Trigger Input. Examples of proper usage of the REMOTE TRIGGER OUT include muting/un-muting other amplifiers, triggering the switched outlets of a Z•Power Controller, or triggering automated events using ELAN®Sense Sensors and VIA! SR-1 or SS1 devices.

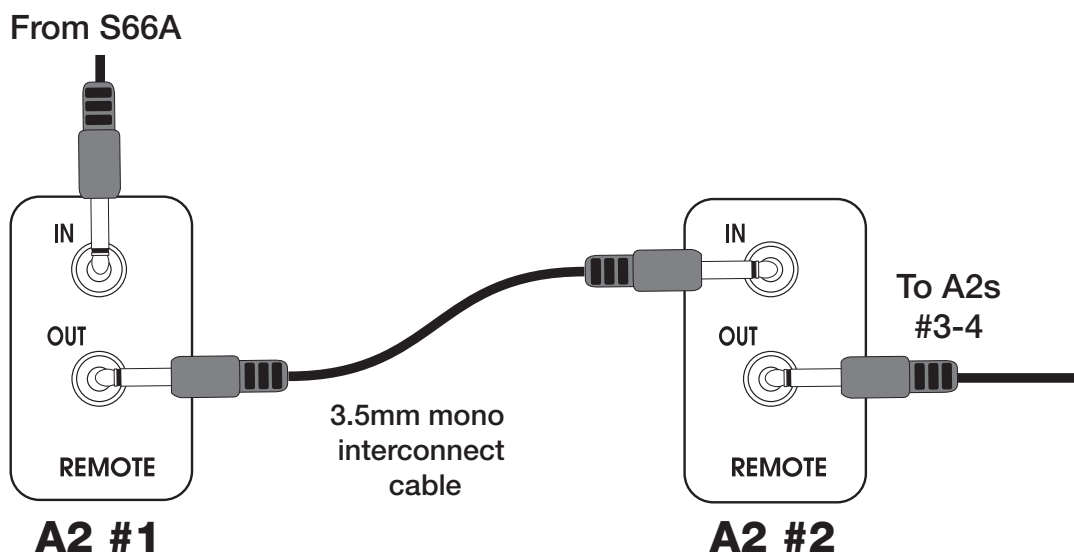


Figure 3-5: Remote Trigger Out

Chapter 4: Operations & Settings

Setting Channel Levels

The A2 features independent Level Adjustment Potentiometers for each of its two channels. Use a small Phillips screwdriver to independently adjust each channel of the amplifier for the specific speakers and environmental conditions of the area it is powering. Turning the potentiometer clockwise increases the level, while turning it counter-clockwise decreases the level. Factory default is 50%.

Set the levels by first lowering them all the way down, then raise the volume of any keypads or volume controls to maximum. Slowly increase the level of the channel being adjusted by turning the potentiometer clockwise until the channel begins to distort, then reduce the level slightly (turn counter-clockwise) until distortion is no longer present. Follow this procedure for each channel.

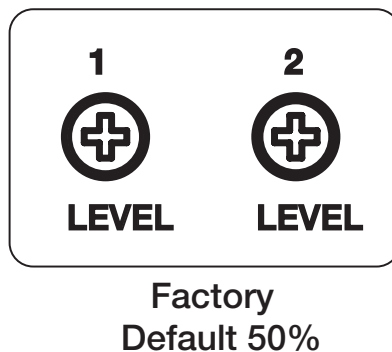


Figure 4-1: Level Adjustment Potentiometers

Chapter 5: Troubleshooting

Symptom	Possible Cause	Solution
No Audio From One or More Channels	<ol style="list-style-type: none"> 1. Loose/bad speaker cable connection 2. Break/short in speaker cable 3. Speaker is defective 4. RCA patch cable defective 5. Source not sending audio 	<ol style="list-style-type: none"> 1. Check cable ends at binding posts and speaker terminals. 2. Check continuity of each speaker cable using multimeter. If short or open is indicated, check wiring for proper connections. 3. Swap with known good speaker. 4. Swap with known good patch cable. 5. Verify source is powered up and playing. Check any tape monitor settings on A/V Receiver.
No Audio From One Channel	Amplifier is overheating due to inadequate ventilation or prolonged operation at clipping levels.	<ol style="list-style-type: none"> 1. (a) Turn the amplifier off and allow the internal circuits to cool. (b) Ensure that the amplifier has proper ventilation. Add cooling fan if necessary. (c) Lower the gain level controls for that channel pair.
No Audio From One Channel	Unit may require service.	Contact ELAN Technical Support.
Very Low or No Sound on Some or All Channels	Audio input cable is bad.	Check source equipment cables for damage and faulty connections and correct.
Audio "Hum"	<ol style="list-style-type: none"> 1. Ground potential difference between source components (ground loop) 2. Faulty/damaged cables 3. Faulty wiring 	<ol style="list-style-type: none"> 1. (a) Test AC outlet using ground tester. (b) Reverse the AC plug of components with non-polarized ends plugged into the same outlet strip as amp. 2. Check source equipment cables for damage and faulty connections. 3. (a) Make sure volume controls are not hooked up backwards. (b) Check for shorts in wiring (see item 2 in "No audio...").

Symptom	Possible Cause	Solution
Distorted Audio at Normal Volume Levels	<ol style="list-style-type: none"> 1. Input gain set too high 2. Defective/incompatible speaker 3. Volume control wired incorrectly 4. Volume control Impedance Match settings incorrect 	<ol style="list-style-type: none"> 1. Reduce gain to the channel in question. 2. (a) Check for physical damage to speaker. (b) Ensure speakers have appropriate power rating for amplifier. (c) Ensure speakers are rated @ 8 Ohm impedance. This amp is compatible with speakers with 8 Ohm impedance or greater. 3. Check for proper input/output connections at volume control. Input comes from amplifier, output goes to speakers. 4. Verify/correct Impedance Match settings.
Audio is Unclear, Bass Response Low	Speakers out of phase	Verify that + of amplifier goes to +of speaker and - of amplifier goes to - of speaker on ALL speaker leads.
Incorrect Source Playing on Speakers	<ol style="list-style-type: none"> 1. Source connected to wrong input of amplifier 2. Speakers connected to incorrect speaker outputs 3. DIP switches set incorrectly 	<ol style="list-style-type: none"> 1. Verify/correct input connections. 2. Verify/correct speaker connections. 3. Verify/correct DIP switch settings.
Amplifier Will Not Power Up	<ol style="list-style-type: none"> 1. Power switch is Off 2. Circuit breaker tripped 	<ol style="list-style-type: none"> 1. Turn switch On. Switch is located on the back of unit. 2. Reset circuit breaker. Ensure that combined current draw of all devices on circuit does not exceed the circuit's capacity.

Technical Support

If, after carefully following the steps in the **Troubleshooting** section, you are unable to resolve issues with the installation or operation of the A2, please call ELAN Technical Support at 1-800-622-ELAN (3526).

Appendix A: Specifications

Audio Section	
Power Rating - Output Power	60WPC RMS @ 8 Ohms 100WPC RMS @ 4 Ohms 150WPC RMS @ 2 Ohms
Frequency Response	20Hz to 20kHz, -.5dB
Full Power Bandwidth	5Hz to 30kHz
Signal-To-Noise	> 110dB (A-weighted)
Channel Separation	>70dB @1kHz
Total Harmonic Distortion	< .01% @ 1kHz
Intermodulation Distortion	< -90dB
Voltage Gain (AV)	0 - 28, front panel adjustable
Input Impedance	33k Ohms
Connectors	
Input/Loop Outputs	Gold RCA Phono
Speaker Outputs	Gold 5 Way Binding Posts
Power	
AC Power Requirements	120 VAC, 440 Watts
Current Draw	3.7A @120VAC
Triggers	
Remote Trigger Inputs	5 to 24V AC/DC
Remote Trigger Outputs	+12 VDC @0.1A
Dimensions/Weight	
Dimensions w/ Feet (1U w/o Feet)	17 W x 2 1/4 H x 11 D (in) 432 W x 58 H x 280 D (mm)
Weight	16 lbs/7.2 kg

Appendix B: Rack Mounting

Rack-Mount Bracket

When mounting the A2 amplifier in an equipment rack, use the included rack mount brackets for secure mounting and proper ventilation. The A2 requires one rack space, ensure that one rack space above and below the A2 is left open for proper ventilation. To install the A2 into a standard 19" equipment rack:

1. Slide the rack mount kit onto the A2 chassis from the front as shown in *Figure B-1*.

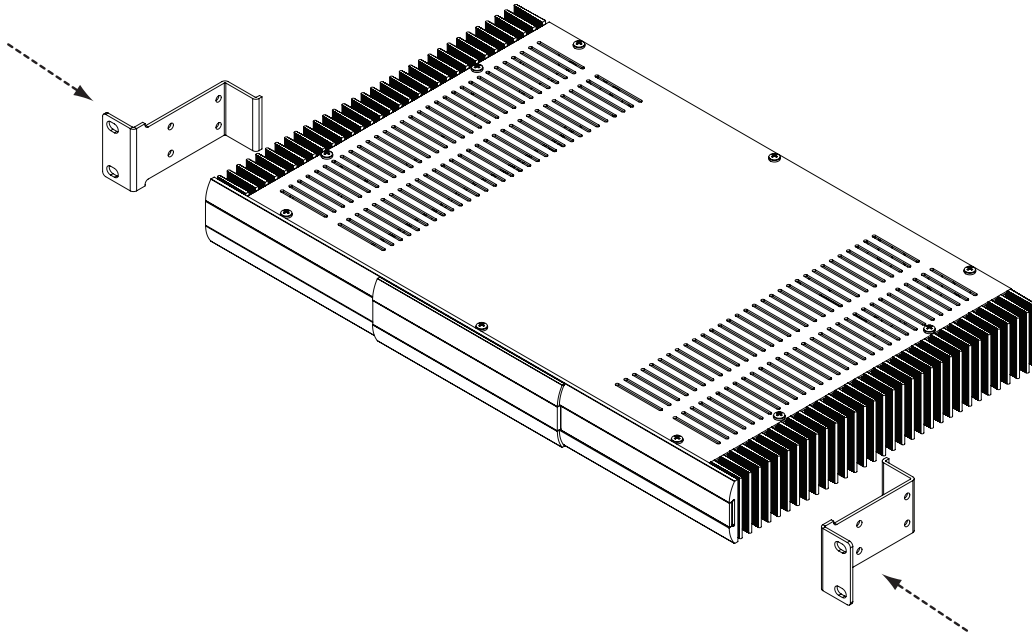


Figure B-1

2. Ensure that the unit is flush with the front of the mounting kit. Install each of the eight screws (included) through the side mounting flanges into the holes in the sides of the unit as shown in *Figure B-2*. Hand tighten screws! Over-tightening could cause damage to the A2 Amplifier.

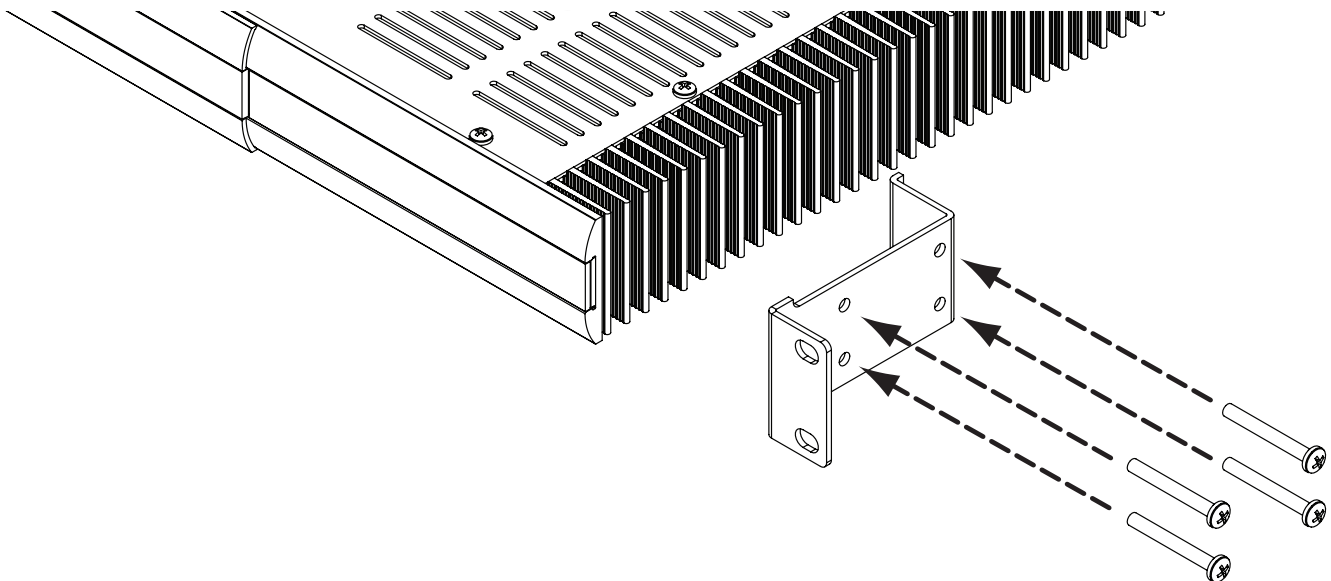


Figure B-2

3. Once the unit is securely mounted, install the entire assembly into a standard 19" equipment rack from the front using four rack screws (not included) as shown in *Figure B-3*.

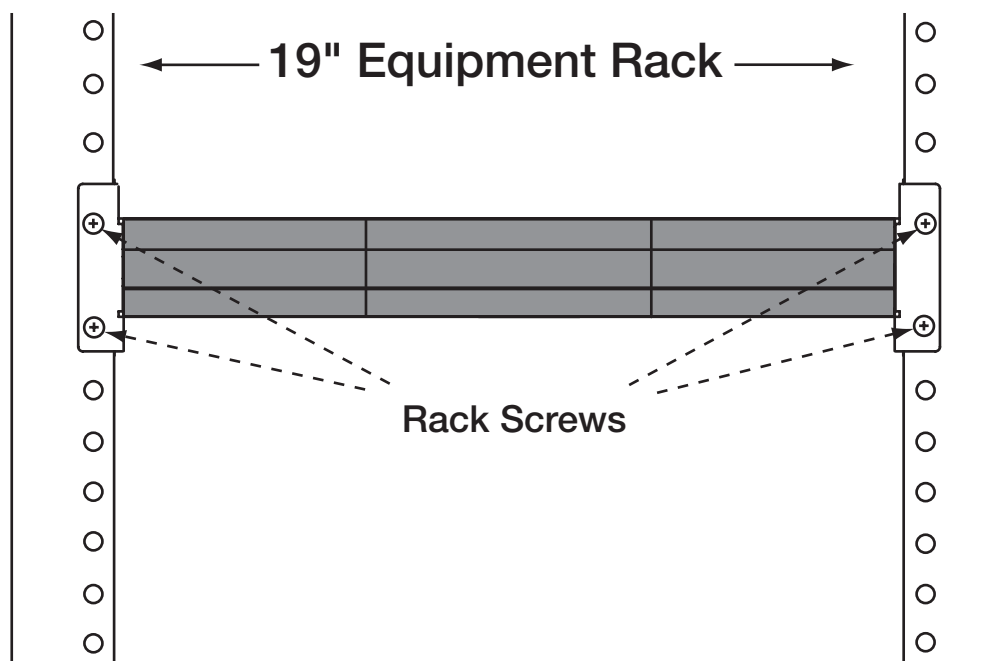


Figure B-3

Notes:

Notes:

Limited Warranty

ELAN HOME SYSTEMS L.L.C. ("ELAN") warrants the ELAN A2 Two Channel Amplifier to be free from defects in materials and workmanship for the period of two years (2 years) from date of purchase. If within the applicable warranty period above purchaser discovers that such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the item at the company's option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment which shall have been installed by other than an ELAN authorized installer, (c) to installed equipment which is not installed to ELAN's specifications, (d) to equipment which shall have been repaired or altered by others than ELAN, (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond ELAN's control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or other catastrophic events beyond ELAN's control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation or other expenses which may be incurred in connection with repair or replacement.

Except as may be expressly provided and authorized in writing by ELAN, ELAN shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by ELAN or services rendered by ELAN.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ATTENTION: TO OUR VALUED CONSUMERS

To ensure that consumers obtain quality pre-sale and after-sale support and service, ELAN Home Systems products are sold exclusively through authorized dealers. ELAN products are not sold online. The warranties on ELAN products are NOT VALID if the products have been purchased from an unauthorized dealer or an online E-tailer. To determine if your ELAN reseller is authorized, please contact ELAN Home Systems at (859) 269-7760.
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